

Attorney's Docket: 2000DE135
Serial No.: 10/004,601
Art Unit: 1756

REMARKS

The Office Action mailed March 28, 2003, has been carefully considered. The amendments and remarks presented herein are believed to be fully responsive to the Office Action. The amendments made herein are fully supported by the Application as originally filed. No new matter has been introduced. Accordingly, reconsideration of the present Application in view of the above amendments and following remarks is respectfully requested.

Claim Status

Claims 1-17 are pending in this Application. By this Amendment, claims 1, 7, 13, 16, and 17 have been amended to more particularly point out and distinctly claim the subject matter which Applicants regard as the invention. New claims 18-20 have been added. Thus, the claims under consideration are believed to include claims 1-20. The specification has been amended on page 32, Table A, to reflect the proper negative charge to the values.

Claim Rejections Under 35 USC § 112, First Paragraph

Claims 1-16 stand rejected under 35 USC § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. The Office is of the opinion that the specification as originally filed does not describe the invention as currently claimed. Specifically, the Office states that the specification does not disclose adding wax coated pigment granules to an electrophotographic toner or developer. Independent claim 1 has been amended to recite a method for coloring a composition which comprises the step of adding wax coated pigment granules having a particular particle size and wax content to a binder resin to form a mixture, grinding and classifying the mixture and incorporating the mixture into the composition. In view of this amendment, it is Applicants' belief that the specification

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describes the invention as currently claimed, in accordance with § 112, first paragraph.

Claim 17 stands rejected under 35 USC § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. The Office is of the position that claim 17 does not have basis in the specification as filed because the specification only discloses the pigment granules as wax-coated, not just coated. Claim 17 has been amended to recite a color composition comprising wax coated pigment granules.

In view of the foregoing, it is respectfully believed that the 35 USC § 112, first paragraph, rejections have been overcome.

Claim Rejection Under 35 USC § 112, Second Paragraph

Claims 1-16 stand rejected under 35 USC § 112, second paragraph, as being indefinite. Specifically, claims 1-16 stand indefinite as the Office believes that the elected species of electrophotographic toners and electrophotographic developers are not "compounds" as referenced in the claims. By this Amendment, Applicants have amended claim 1 to recite "A method for coloring a composition . . ." and have deleted all occurrences of the term "compound."

Claim 17 stands rejected as indefinite for the same reason as claims 1-16. Claim 17 has been amended to recite a colored composition comprising wax coated pigment granules.

In view of the foregoing remarks and amendments, it is respectfully contended that the 35 USC § 112, second paragraph, rejections have been overcome.

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Claim Rejections Under 35 USC § 103

Claim 17 stands rejected under 35 USC § 103(a) as being unpatentable over Pollard in US Patent 4,173,492 in view of *Handbook of Imaging Materials* to Diamond, pp. 162-171. This rejection is respectfully traversed.

The Office is of the position that Pollard discloses a composition having a wax coated pigment dispersed in a polymeric resin, and that the resin that is pigmented is a thermoplastic material. The Office further holds that these resins are disclosed by Diamond as being conventionally used as a toner binder resin. The Office then concludes that it would have been obvious to one having ordinary skill in the art to produce the wax coated pigment with a size of at least 50 microns. Applicants respectfully can not agree.

It is Applicants' position that the Office has not established a *prima facie* case of obviousness of claim 17 in view of prior art. Specifically, Applicants submit that the prior art fails to provide the motivation or incentive for one with ordinary skill in the art to arrive at Applicants' claimed invention.

As stated by the Office, claim 17 is directed to a mixture of a binder resin for electrophotographic toner or developer and the wax coated pigment particles. "That is, the claim presents the intermediate product of Example 4 (¶ [0102]) before the mixture was ground and classified". Pollard, in contrast, discloses a method of preparing coated pigment particles for dry compounding with a polymeric material, and provides special attention to the fact that the resulting plastic material can be formed into plastic containers for use in the food process industry. See column 4, lines 45-64. Pollard does not teach, disclose or suggest the use or desirability of employing wax-coated pigment particles in an electrophotographic toner or developer.

Diamond discloses resin families for use in imaging materials, but provides no suggestion or intimation that a wax coated granular pigment could be used in an electrophotographic toner or developer.

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It is beyond contention that a *prima facie* case of obviousness under § 103 requires the prior art to provide some motivation or incentive for one with ordinary skill in the art to modify the prior art in a manner which would arrive at an applicant's invention. Here such motivation is lacking. One with ordinary skill in art, having a knowledge both Pollard and Diamond, would find no motivation to employ the wax coated pigment granules of the present invention in an electrophotographic toner or developer. This lack of motivation becomes apparent when it is realized that neither reference contemplates the use of pigment coated wax granules in an electrophotographic developer or toner. As neither Diamond or Pollard provide the necessary motivation for one with ordinary skill of the art to arrive at the invention as defined by claim 17, it is respectfully contended that any motivation necessary to substantiate a §103 rejection is gained by the use of impermissible hindsight based upon a knowledge of Applicants' disclosure.

The Office's *prima facie* case of obviousness is also wanting as there exists no reasonable expectation of success in regard to the Office's proposed combination. There is nothing in either reference which would enable one with ordinary skill in the art to enjoy a reasonable expectation of success with regard to the introduction of a wax coated granular pigment to an electrophotographic toner or developer. Prior to Applicants' invention, it was unpredictable how such wax coated pigment products would change the electrostatic behavior of the toner or developer.

For all the foregoing reasons, it is respectfully submitted that claim 17 is not made obvious by any combination of Pollard in view of Diamond.

Claims 1-3, 5-10, and 12-16 stand rejected under 35 USC § 103(a) as being unpatentable over *Handbook of Imaging Materials* to Diamond, pp. 162-171 and 193-197 in view of Pollard in US Patent 4,173,492. This rejection is respectfully traversed.

It is Applicants' position that the Office has failed to establish a *prima facie* case of obviousness of claims 1-3, 5-10 and 12-16 as being unpatentable over Diamond in view of Pollard. The Office holds that "it would have been obvious to

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one having ordinary skill in the art . . . to use a wax coated pigment as the colorant in preparation of the conventional toner as discussed by Diamond, because Diamond teaches that dispersion of the colorant in a binder resin is a critical feature in toner manufacture," and Pollard teaches that wax-coated pigments have improved the dispersion in thermoplastic binder systems. Applicants respectfully can not agree with this conclusion.

The Office makes reference to the text of Diamond, p. 193, §4.6.1, where it is stated, "[p]igment and additive dispersion and particle size and size distribution are parameters that can strongly influence the quality of the resultant images..." However, on page 194, §4.6.2, Diamond states, "it is possible that an ultimate dispersion is not the most useful". Further, Diamond states "[t]he most effective dispersion of many xerographic additives is not well understood." Given these statements, the Diamond reference is, at best, equivocal regarding the impact of pigment and additive dispersion on the quality of the resultant toner or developer.

In consequence, one with ordinary skill in the art having a knowledge of both Diamond and Pollard, assuming, *arguendo*, that such artisan would combine the references, would at first be drawn into a state of uncertainty as to whether additional dispersion is desired given the teachings of Diamond. Furthermore, as Diamond and Pollard provide no motivation, intimation or incentive for one with ordinary skill in the art to use wax-coated pigment granules in the production of electrophotographic toners and developers, such artisan would have absolutely no idea that the employment of such wax-coated pigment granules would have a beneficial impact, especially on the toner or developer's electrostatic properties. It is, therefore, Applicants' position that one with ordinary skill in the art having a knowledge of Diamond and Pollard would have no motivation to combine the references in the manner proposed by the Office, and that any motivation to make the invention defined by the claims is due to a knowledge of Applicants' disclosure.

Furthermore, with respect to all the claims in of the Application, Applicants have clearly demonstrated unexpected results. On page 32, inventive examples 4, 5

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and 6 show a perfect charge constancy after 10 minutes activation, in contrast to comparative examples 7 and 8, which do not. This surprising technical advantage could not be foreseen, and constitutes further evidence of the patentability of the present invention, as defined by the claims, over the prior art of record.

Claims 10 and 11 stand rejected under 35 USC § 103(a) as being unpatentable over *Handbook of Imaging Materials* to Diamond, pp. 162-171 and 193-197 in view of Pollard in US Patent 4,173,492 as applied to claims 1-3, 5-9, 12, 13, 15 and 16 above, and further in view of Macholdt et al. in US Patent 6,159,649. For all the foregoing reasons with respect to the 35 USC § 103(a) rejection of claims 1-3, 5-10, and 12-16, it is Applicants' courteous position that claims 10 and 11 are not made obvious by any combination of the cited references.

In a copy of the initialed 1449 form returned to applicant, the Examiner has indicated 2 references were missing. Applicant respectfully requests reconsideration of these references which were submitted in an information disclosure statement mailed on May 21, 2002 and indicated as received by the Office in a returned postcard stamped on May 24, 2002 (copy enclosed). The references and a copy of the signed 1449 are attached hereto.

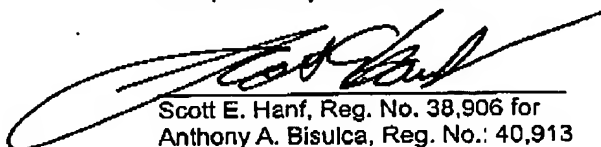
In view of the foregoing, it is respectfully contended that the 35 USC §103(a) rejections have been traversed. Applicants, therefore, request reconsideration and withdrawal of the rejections.

As the total number of claims does not exceed the number of claims originally paid for, no fee is believed due. However if an additional fee is required, the Commissioner is hereby authorized to credit any overpayment or charge any fee deficiency to Deposit Account No. 03-2060.

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In view of the forgoing amendments and remarks, the present application is believed to be in condition for allowance, and reconsideration of it is requested. If the Examiner disagrees, he is requested to contact the attorney for Applicants at the telephone number provided below.

Respectfully submitted,



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In re application of: Ulrike FOHR, et al.

Application No.: 10/004,601

Filed: November 1, 2001

For: USE OF COATED PIGMENT GRANULES IN ELECTROPHOTOGRAPHIC
TONERS AND DEVELOPERS, POWDER COATINGS AND INKJET INKS

The impressed Mail Room date stamp acknowledges receipt on the date indicated of:

- Information Disclosure Statement
- Form 1449
- 43 References



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May 21, 2002

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GROUP 1700



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